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(71) Applicant (for all designated States except US): **VIRCO BVBA** [BE/BE]; Generaal De Wittelaan L 11B 4, B-2800 Mechelen (BE).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **VAN MARCK, Herwig, Gaston, Emiel** [BE/BE]; Lakenmeerstraat 27, B-9810 Nazareth (BE). **VAN DEN BULCKE, Tim, Ger-rit** [BE/BE]; Gentssesteenweg 45, B-2800 Mechelen (BE). **VERMEIREN, Hans, Victor** [BE/BE]; Vennecourtlaan 42, B-2812 Muizen (BE).

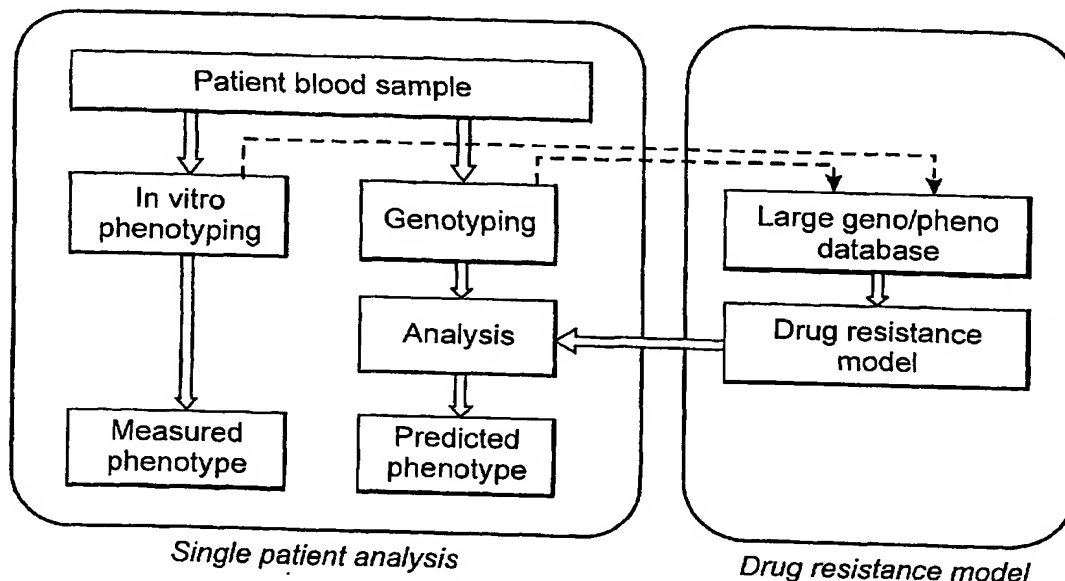
(74) Agent: **DAELEMANS, Frank**; Tibotec-Virco Comm. VA, Generaal De Wittelaan L11 B3, B-2800 Mechelen (BE).

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(54) Title: COMPUTATIONAL METHOD FOR PREDICTING THE CONTRIBUTION OF MUTATIONS TO THE DRUG RESISTANCE PHENOTYPE EXHIBITED BY HIV BASED ON A LINEAR REGRESSION ANALYSIS OF THE LOG FOLD RESISTANCE



(57) Abstract: The present invention concerns methods and systems for analysis of drug resistance in HIV-1. More specifically, the invention provides methods for predicting drug resistance by correlating genotypic information with phenotypic profiles. The methods allow the identification of primary and secondary resistance-associated mutations for new and existing drugs and for calculating the contribution of mutations and combinations of mutations to resistance and hyper-susceptibility. The invention allows the design, optimization and assessment of the efficiency of a therapeutic regimen based upon the genotype of the disease affecting a patient.

**Declarations under Rule 4.17:**

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for all designations
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